

REMARKS

Claims 16-28 have been examined and stand rejected. By the above amendments, claims 16, 23, and 26 have been amended, and claims 22, 25, and 28 have been canceled. Accordingly, claims 16-21, 23, 24, 26, and 27 now are pending in the subject application. Favorable reconsideration of the application and allowance of all of the pending claims are respectfully requested in view of the above amendments and the following remarks.

Claims 16-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over International Publication No. WO 01/56297 to Naden in view of U.S. Publication No. 2004/0177381 to Kliger. For the following reasons, Applicant respectfully traverses this rejection insofar as it applies to the amended claims.

The independent claims 16, 23, and 26 have been amended to include the subject matter of claims 22, 25, and 28, respectively. Amended independent claim 16 sets forth a networked system comprising: a switch, a first receiving device, and a second receiving device. The claimed switch is configured to receive multimedia signals originating from a remote source, and the first receiving device is configured to control the switch to selectively receive at least a portion of the multimedia signals from the switch. The first receiving device includes a storage device configured to selectively store multimedia signals received from the switch and is capable of supplying the stored multimedia signals to the switch making the stored signals available to the second receiving device. According to claim 16, the first receiving device further comprises a modulator configured to modulate the stored multimedia signals prior to supplying the stored multimedia signals to the switch. The second receiving device is configured to control the switch to selectively receive via the switch at least a portion of the multimedia signals originating from the remote source and to selectively receive via the switch at least a portion of the stored multimedia signals from the first receiving device.

As can be appreciated from the embodiment shown in Fig. 3 of the present application, for example, claim 16 essentially relates to a system in which a switch selectively routes remotely-transmitted signals to a number of different receiving devices, such as DHCTs or “set-top boxes” in a local network. One of the receiving devices can store multimedia content from a remotely-transmitted signal and modulate and transmit the stored multimedia content to the

switch. This multimedia content can be accessed by the other receiving devices via the switch. In particular, as recited in claim 16, the first receiving device comprises: a modulator configured to modulate the stored multimedia signals prior to supplying the stored multimedia signals to the switch; and a second receiving device is configured to control the switch to selectively receive via the switch at least a portion of the stored multimedia signals from the first receiving device. Such a scheme allows multiple set-top boxes to access content stored in one set-top box without requiring each set-top box to contain the hardware to record and store content. While the scope and wording of independent claims 23 and 26 differ from those of claim 16, claims 23 and 26 also relate to this scheme; thus, the following points also apply to these claims.

While Naden recognizes the problem of storing and distributing video signals within a network of set top box (STB) devices (see, e.g., page 1, lines 22 to page 2, line 4 of Naden), Naden proposes a solution very different from that of the claimed invention. Naden discloses a home video distribution and storage system which provides for wireless distribution of signals from direct-to-home satellite service via a master set top box (MSTB) 110 to networked slave set top box (SSTB) devices 116. Naden's system also allows for wirelessly sharing a video memory system (VMS) 402 of the MSTB 110 with the networked SSTB devices 116. Naden's MSTB 110 includes an RF switch 202 for delivering RF wideband signals from the satellites to one or more TV tuners 204 configured to down-convert the wideband signals into a baseband signal and pass the baseband signal to demux chains 206 for converting the baseband signal into a resulting signal consisting of MPEG2 transport streams (see page 7, lines 4-27 of Naden). The decoded streams are combined in a multiplexer 208 and fed to the local TV set 112 and a base station radio transceiver 214 configured to wirelessly forward selected signals to the receiving network devices 116 (see p. 8, line 1 to p. 9, line 6 of Naden). Naden discloses that each receiving STB device is configured to send program selection signals to the base station transceiver 214 indicating the channel(s) desired for viewing. The collection of these selection signals indicates to the MSTB 110 which channels are to be outputted by the RF switch 202, decoded, remultiplexed into a new MPEG2 stream and broadcasted via the wireless network to the receiving SSTBs. Naden's SSTBs in turn decodes the received MPEG2 stream based upon its original requirements and selects the programs it requires (see page 8, line 1 to page 9, line 6 of Naden).

Naden further discloses that the VMS 402 is arranged between the mux 208 and the wireless protocol converter 212 (see page 11, line 22 to page 12, line 25 of Naden). Therefore, the VMS 402 is capable of storing the converted signals (i.e., MPEG Transport Stream) from the mux and, upon recall, forwarding the converted signals to the wireless converter 212 to be wirelessly transmitted to the SSTB devices 116. In other words, the signals from Naden's VMS 402 are being forwarded to the SSTBs via the wireless network instead of being sent back through the RF switch 202.

Kliger discloses a home content distribution solution that provides distribution capabilities between a home media server (HMS) 24 and a remote thin client stand-alone box 28. However, like Naden, Kliger's proposed solution has pronounced differences from the claimed invention. Kliger's system distributes content from a home media server (HMS) 24 to a set top box (STB) via a home distribution network 40. Kliger's system further comprises: an active reflector 36, and an entry point device 32 including an entry terminal for connection to an external cable network, a first output terminal for connection to the home distribution network 40, and a second output terminal for connection to the active reflector 36. Kliger discloses that the entry point device 32 is used to split the cable network signal to send part of the signal to the active reflector 36 and the remaining signal to the home distribution network 40 (see paragraph [0021] and Fig. 3 of Kliger). Kliger indicates several problems (e.g., multipath effects, interference due to insufficient splitter isolation, etc.) associated with communication between a HMS 24 and thin-client 28 connected via a splitter 14 (see paragraph [0020] and Fig. 2 of Kliger). Kliger discloses several embodiments for addressing such problems by using an active reflector 36 to shift the frequency of the legacy signals of the HMS 24 to be forwarded to the thin-clients 28 (see paragraphs [0021] – [0023] and Fig. 3 of Kliger). Kliger further discloses that the HMS 24 transmits its MPEG video signal at a frequency above the CATV signal (i.e., above 960 MHz) in the same format and modulation scheme as the head end of the external CATV network 10. This signal reaches the passive entry point device 32, from which it is forwarded to the active reflector 36. The active reflector 36 receives and down-converts the signal to the IF frequency, filters the TV signal, and up-converts the TV signal to a predefined TV band (between 750 MHz and 860 MHz). When the STB 20 is tuned to a specific video

channel, it can receive the MPEG2 video generated by the home media server 24 (see paragraph [0032] and Fig. 3 of Kliger).

The Examiner compares the RF switch 202, the local set interface 216, the video memory system (VMS) 402, and the slave set top boxes 116 of Naden to the switch, first receiving device, storage device, and second receiving device of claim 16, respectively. The Examiner acknowledges that Naden does not explicitly teach, as required by claim 16, the first receiving device supplying the stored multimedia signals to the second receiving device via the switch. In the rejection of claim 16, the Examiner further relies on Kliger's disclosure in paragraph [0020] for the HMS 24 providing recorded multimedia to thin clients 28 via splitter 14 in order to allegedly compensate for the deficiency of Naden.

However, as discussed above, Naden's video home distribution and storage system differs from the networked system of claim 16 in *several* ways. Claim 16 requires that the first and second receiving devices receive at least a portion of the multimedia signals via the switch and the second receiving at least a portion of the stored multimedia signals from the first receiving device via the switch. By contrast, Naden's local set interface 216 and SSTB 116 receive signals that have been down-converted by TV tuners 204 and demux chains 206 into a resulting signal consisting of MPEG2 transport streams for forwarding via a combination of a mux 208, a wireless protocol converter device 212, and a base station radio transceiver 214 (see Fig. 2 of Naden), rather than the switch 202. In other words, Naden's local set interface 216 receives the converted signal (i.e., MPEG2 Transport Stream) from the mux 208, and SSTB 116 receives the converted signal from the Base Station Radio Transceiver 214. Neither of Naden's devices receives a signal directly from the RF switch 202, as required by claim 16. Naden further discloses that MSTB 110 further comprises a video memory system (VMS) 402 arranged between the mux 208 and the wireless converter 212 of the base station transceiver 214. Naden's incorporated VMS 402 provides the capability to store selected video for future viewing and can be shared wirelessly by any of the networked devices 116. Naden discloses that the VMS stores the digital signals (i.e., MPEG2 Transport Stream) encoded by the mux 208 (see page 11, line 22 to page 13, line 5 of Naden). Therefore, rather than the second receiving device selectively receiving via the switch at least a portion of the stored multimedia signals, as required

by claim 16, upon recall, these encoded signals stored in Naden's VMS 402 are presented directly to the wireless converter 212 for wirelessly sharing the stored signals with the networked SSTBs (see Fig. 5 of Naden).

Claim 16 further requires a modulator configured to modulate the stored multimedia signals prior to supplying the stored multimedia signals to the switch. The Examiner compares the wireless protocol converter 212 and base station transceiver 214 to the modulator of claim 16 and suggests that one of ordinary skill in the art would consider the disclosure found in paragraph [0020] of Kliger to modify Naden in order to supply the stored signals of the Naden's VMS 402 to the RF switch 202. However, in order to forward the stored signals (i.e., MPEG2 Transport Stream) of Naden's VMS 402 to the RF switch 202, as suggested by the Examiner, the stored signals would have to be converted back to RF wideband signals in order to be processed back into an MPEG2 Transport Stream and into wireless protocol for forwarding via the base station radio transceiver 214 to the SSTB 116. Furthermore, Naden discloses that difficulties arise when distributing satellite signals via cables to TV sets that are remote from the master set (see page 1, lines 10-21 of Naden). This is a direct teaching away from the concepts described in paragraph [0020] and Fig. 2 of Kliger as suggested by the Examiner. Therefore, even if one of ordinary skill in the art had considered modifying Naden in a manner as suggested by the Examiner, they would not have considered Kliger in the modification of Naden.

Even if one of ordinary skill in the art, at the time the present invention was made, were to have considered Kliger, he would have had no rationale for modifying Naden according to paragraph [0020] and Fig. 2 of Kliger. Paragraph [0020] of Kliger identifies several problems (i.e., the production of multipath effects and signal interference introduced by insufficient splitter isolation) resulting from the introduction of stored content of a home media server 24 to a splitter 14 (i.e., RF switch) of a home distribution network, as shown in Fig. 2 of Kliger. Kliger's disclosure is rather directed toward solutions to these problems by disclosing an arrangement, as described above, including an entry point 32, reflector 36, and home distribution network 40 including digital set-top boxes 20, analog televisions 18 and the home media server 24 (see paragraph [0021] and Fig. 3 of Kliger). Kliger discloses embodiments wherein the reflector 36 is used to modulate the stored signals from the media server 24 after the stored signals are supplied

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to the entry point 32 (see paragraphs [0021] to [0023] and Fig. 3 of Kliger), rather than modulate the stored multimedia signals prior to supplying the stored multimedia signals to the switch, as required by claim 16.

Consequently, no combination of Naden and Kliger renders obvious the subject matter of claim 16 and its dependent claims. Likewise, independent claims 23 and 26 have been amended with similar features as those introduced in claim 16. Therefore, independent claims 23 and 26 and their dependent claims are considered to be in condition for allowance for substantially the same reasons as argued above with regard to claim 16. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this rejection.

In view of the foregoing, Applicant respectfully requests the Examiner to find the application to be in condition for allowance with claims 16-21, 23, 24, 26, and 27. However, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to call the undersigned attorney to discuss any unresolved issues and to expedite the disposition of the application.

Applicant hereby petitions for any extension of time that may be necessary to maintain the pendency of this application. The Commissioner is hereby authorized to charge payment of any additional fees required for the above-identified application or credit any overpayment to Deposit Account No. 05-0460.

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